A New Genus of Membracidae from China[1]

(Homoptera : Membracidae)

PAUL P. COOK, JR.
Seattle University, Seattle, Washington

The membracid tribe Hypsauchenini (subfamily Centrotinae) has previously included seven genera, and with the addition of *Notohypsa* includes eight genera. This tribe is rather easily distinguished from other Centrotinae, but confusion could result in the future if some comment were not offered here on the differences between Hypsauchenini and Oxyrhachini (Oxyrhachinae *sensu* Capener, 1962).

The Oxyrhachini have been characterized as having (1) front tibiae foliaceous, (2) head foliaceous, (3) mesonotal scutellum not visible, (4) propleural (ventrolateral pronotal) and mesopleural processes. The Hypsauchenini are also found to have the head foliaceous (variable, but as consistently so as Oxyrhachini), and also to possess the ventrolateral pronotal and mesopleural processes. In addition, the Oxyrhachini as presently defined contains some species with the mesonotal scutellum visible (e.g., *Xiphistes orientalis*), while some members of the Hypsauchenini may have the scutellum concealed (e.g., *Pyrgonota bifurca*). Therefore, of the characters mentioned, we are left only with the foliaceous tibiae to distinguish these two tribes.

Foliaceous is defined by Torre Bueno (1937) as meaning "leaf-like." However, in the membracid literature, "foliaceous" in reference to the head means flat with the ventrolateral margins of the vertex and usually the clypeus broad and expanded to be somewhat leaf-like, but, in reference to the tibiae, "foliaceous" means simply broad and flattened laterally. Most Membracidae have the tibiae flattened laterally, and difficulty may therefore arise as to what constitutes "broad"; however, the tibiae of the Oxyrhachini are 20 per cent to 40 per cent as broad as they are long, while in the Hypsauchenini the tibiae are only 10 per cent to 20 per cent as broad as they are long. Therefore, in general, the tibiae of Oxyrhachini appear "foliaceous" while those of the Hypsauchenini do not.

Another character is available which will immediately distinguish these two tribes. The Hypsauchenini consistently possess a single anterior pronotal horn which in some genera is bifurcate at the tip, while the Oxyrhachini possess either two suprahumeral horns or no anterior pronotal horns.

---

[1] This work was supported in part by a grant from the Seattle University Research Committee. Specimens for this paper were made available by C. Don MacNeill, California Academy of Sciences.

THE PAN-PACIFIC ENTOMOLOGIST 40: 222–226. October 1964

Nymphs will undoubtedly lend valuable evidence regarding classification when they are better known. The author has only seen nymphs of the new genus *Notohypsa* Cook in the Hypsauchenini, and of the genera *Xiphistes, Kambozana,* and *Gongroneura* from Africa (sent by A. L. Capener), and of *Oxyrhachis* from India in the Oxyrhachini. In the nymphs thus far seen, the Hypsauchenini have the pronotum expanded dorsally into a rounded, laterally flattened anterior horn that extends posteriorly to form a posterior node above the mesothorax, and the sixth and seventh abdominal segments bear long curved spines projecting laterally. Nymphs of the Oxyrhachini have an anterior dorsal pronotal horn which is not extended posteriorly, and very small laterally projecting spines on the last several abdominal segments.

Key to Genera of the Tribe Hypsauchenini

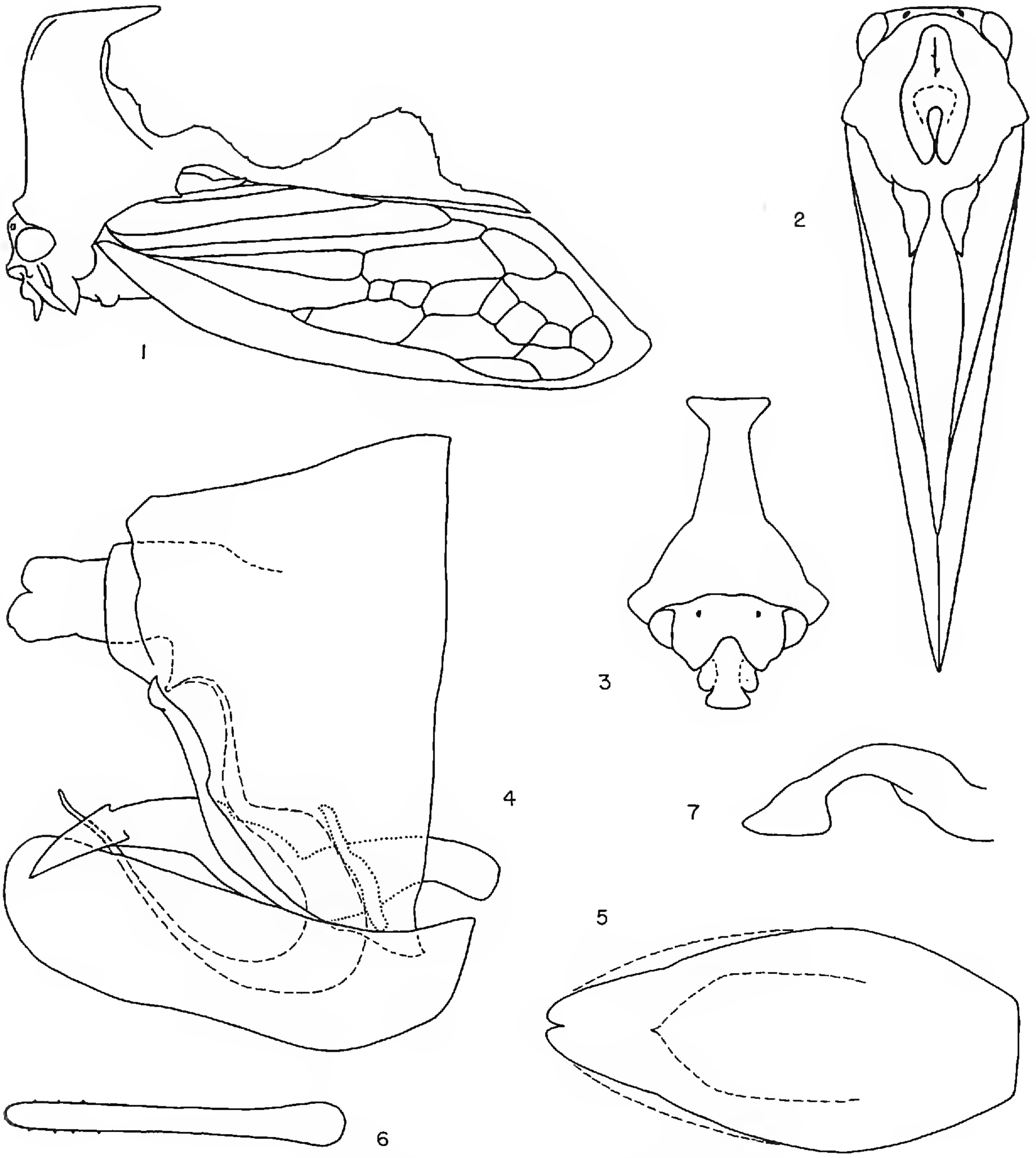
1. Posterior pronotal process with a definite dorsal subapical node .... 2.
   Posterior pronotal process without a definite dorsal subapical node .... 6.
2. Clypeus extending only slightly below ventral margins of vertex (inferior margins of genae *sensu* Funkhouser) .... *Gigantorhabdus*
   Clypeus extending half or more of its length below ventral margins of vertex 3.
3. Tegmina with five apical and two discoidal cells .... *Pyrgauchenia*
   Tegmina with five apical and three or four discoidal cells, or venation irregular .... 4.
4. Pronotal horn unbranched, not bifurcate distally .... *Hypsolyrium*
   Pronotal horn bifurcate distally .... 5.
5. Clypeus single or indistinctly trilobed, base of posterior pronotal process impinging on scutellum so that scutellum is barely visible .... *Hypsauchenia*
   Clypeus distinctly trilobed, the two lateral lobes half the distance from ventral margins of vertex to apex of clypeus, base of posterior pronotal process arched above scutellum .... *Notohypsa*, n. gen.
6. Anterior pronotal process bifurcate apically and recurved posteriorly .. *Pyrgonota*
   Anterior pronotal process unbranched .... 7.
7. Anterior pronotal process extending upward, bulbous at tip .... *Funkhouserella*
   Anterior pronotal process extending forward, narrowing from base to apex .... *Hybandoides*

Notohypsa Cook, new genus

Most closely resembling *Hypsolyrium*, but with pronotal horn bifurcate apically, scutellum largely exposed, and more definite venation.

Head.—Broadly foliaceous, about as wide as long, upper margin bituberculate; ocelli farther from each other than from eyes, above centroocular line; clypeus trilobed with apical lobe extending ventrally well beyond lateral lobes, extending about two-thirds its length below ventral margins of vertex (inferior margins of genae *sensu* Funkhouser).

Thorax.—Pronotal horn single, erect, high, laterally flattened, bifurcate at apex; base of posterior process arcuate fully exposing mesonotal scutellum; posterior process bearing a large, laterally flattened, subapical node; ventrolateral exten-



EXPLANATION OF FIGURES

Figs. 1–7. *Notohypsa capeneri* Cook. 1, lateral view. 2, dorsal view; dashed line represents edge of depressed central area. 3, anterior view. 4, lateral view of genital capsule. 5, dorsal view of subgenital plate; outer dashed line represents outline in ventral view, inner dashed line represents inner surface. 6, ventroposterior view of posterior arm of aedeagus. 7, dorsal view of distal half of right paramere.

sions of pronotum tooth-like and extending ventroposterior to eyes, another adjacent separate smaller tooth-like lobe beneath eye; a ventrolateral tooth also present on mesonotum.

Tegmina.—Coriaceous and punctate basally and along costal margin; five apical and three discoidal cells or venation reticulate; apical limbus average.

TYPE.—*Notohypsa capeneri* Cook.

Notohypsa capeneri Cook, new species

Medium-sized membracids with the anterior pronotal horn upright, laterally concave, bifurcate at the tip, and the head appearing five-lobed due to the broadly expanded lower margins of the vertex and the trilobed clypeus; color stramineous with brown markings, or brown.

Head.—Excluding eyes about as wide as long, upper margin bituberculate, tubercles not strikingly developed and partly covered by frontal margin of pronotum; ecdysial line variable, usually apparent as a vertical carina; ocelli approximately twice as far from each other as from eyes, above centroocular line; lower margins of vertex (inferior margins of genae *sensu* Funkhouser) sinuate, ventrolateral edge turned slightly forward; clypeus trilobed, lateral lobes rounded, ventral lobe broadly truncate and hirsute, clypeus extending ventroposteriorly, about two-thirds its length below ventral margins of vertex, lateral lobes and apex curving ventrally; face stramineous and brown, or brown, lower tips of vertex lightest.

Thorax.—Pronotum laterally flattened, densely punctate, metopidium approximately vertical, frontal margin of pronotum extending forward over head; dorsal anterior horn single, erect, inclined forward but curving slightly backward before bifurcate apex, bifurcations about 0.5 mm long, extending directly posteriorly and curving outward then inward so that apices touch; horn concave laterally, anterolateral margins expanded, irregularly dentate and sometimes nearly carinate, posterolateral margins carinate and irregularly dentate; median carina largely percurrent, irregularly dentate, sometimes partly obsolete on anterior margin of horn; posterior margin of horn sloping posteriorly; base of posterior process arcuate exposing mesonotal scutellum, posterior process nearly or actually impinging on tegmina behind scutellum, bearing a large laterally flattened dorsal subapical node which is approximately two-thirds as high as anterior horn; apex of posterior process acuminate and extending well beyond internal angles of tegmina; pronotum stramineous to brown and sparsely finely pilose; all dentes dark brown; lateral margins of scutellum sinuate; thorax dark brown ventrally.

Abdomen.—Yellow to brown, sometimes marked with red; terga smooth; densely finely punctate.

Tegmina.—Coriaceous and punctate basally and along costal margin with large darker brown punctations scattered along veins, semiopaque with white markings distally; with five or six apical and several discoidal cells, probably basically five apical and three discoidal, but third apical and at least second discoidal subdivided resulting in a somewhat reticulate appearance; apical limbus average in extent, wrinkled.

Measurements:

	Males	Females
Length to tip of posterior process	4.25 to 4.75 mm	5 to 5.75 mm
Length to tips of tegmina	5.25 to 5.75 mm	5.75 to 6.25 mm
Width at humeral angles	1.5 mm	1.75 mm
Height, humeral angle to apex of horn	1.75 to 2 mm	2.25 to 2.5 mm

Male genitalia.—Genital capsule height : length = 5 : 4. Subgenital plate carinate ventrally in basal third, ampliate in distal third, distal two-thirds hirsute; in ventral view broadest just before middle, narrowing to rounded divided apex; dorsal aspect similar but apparent constriction approximately three-fourths distance from base to apex (grooves to accommodate parameres); outer and inner surfaces continuous but well spaced resulting in cavity between. Lateral valves with small convexity near apex (dorsoposteriorly), the two lateral valves continuous and not divided mesally. Posterior arm of aedeagus very thin (lateral view), about 25 times as long as thickness at middle, arcuate in distal quarter; in posteroventral view ampliate proximally, then nearly parallel-sided to rounded apex, a few (three or four) small teeth projecting laterally from each side in distal third. Parameres fluke-shaped (like fluke of anchor) at apex, in lateral view gently arched from apices to just anterior of middle, the basal portion a partial arch; in dorsal view apices widely divergent, converging anteriorly to just posterior to aedeagus (anterior arm), then diverging anteriorly; hirsute on posterior half except for fluke-shaped apex which is hirsute only on basal ventral surface and naked dorsally.

Holotype male, allotype female, 2 male and 2 female paratypes, all labeled SUISEPA, 1,000 M LICHUAN DISTR. W. HUPEH, CHINA, 16 September 1948. Gressitt and Djou collectors. Holotype, allotype, 1 male and 1 female paratype in the California Academy of Sciences; 1 male and 1 female paratype in the author's collection.

This species is named for A. L. Capener of Pretoria, South Africa.

LITERATURE CITED

CAPENER, A. L. 1962. The taxonomy of the African Membracidae. Part 1. The Oxyrhachinae. Republic of South Africa, Dept. of Agr. Tech. Services, Entomol. Memoirs vol. 6. 164 pp.

FUNKHOUSER, W. D. 1951. General Insectorum, Fascicle 208, family Membracidae, pp. 1–383, pl. 1–14.

TORRE BUENO, J. R. DE LA. 1937. A glossary of entomology. Brooklyn Entomol. Soc. 336 pp.